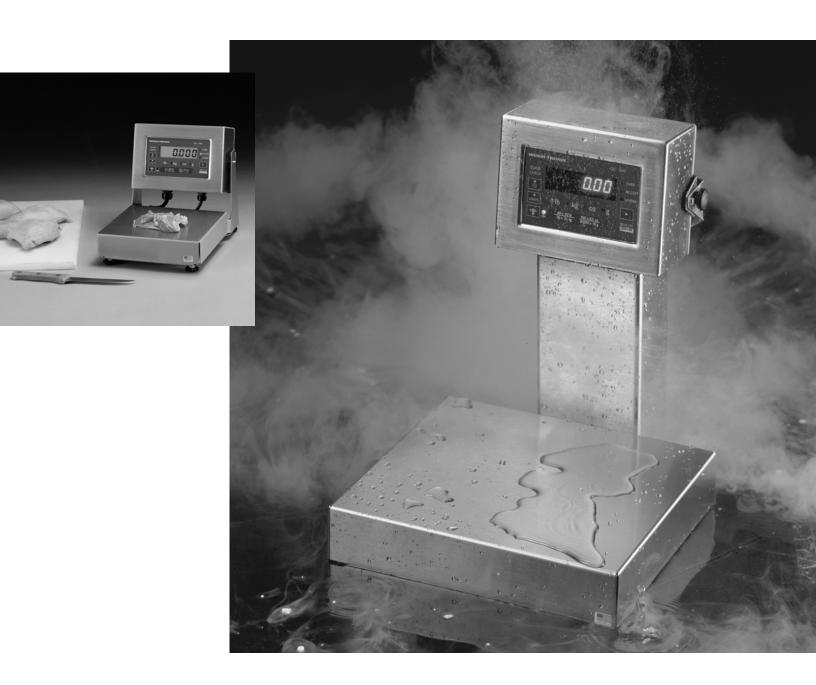
Avery Weigh-Tronix



QC-3265 Checkweigher Service Manual

Table of Contents

Table of Contents	3
Specifications	4
Introduction	7
Front Panel	7
Keys	8
Annunciators	9
Installation	
9	
User Menu	10
Configuration	13
Password protection	16
Calibration	17
Serial	24
Sealing	30
Reset Menus	31
Error Displays	33
Disassembly	34
Appendix 1: Editing Capacity and Division	36
Appendix 2: Editing Span Value for Calibration	37
Appendix 3: Complete Menu Structure	39
Low Capacity Parts and Assy	41
Medium Capacity Parts and Assy	42
Display Enclosure (Stainless) Parts and Assy	43
Battery Option Parts and Assy	44
Model QC-3265 Checkweigher System Block Diagram	45
PC Board Assemblies	46
Indicator Keypad & Schematic	48
3265 Dimensional Drawings	49
Figures	
Figure 1 QC-3265 Front Panel	7
Figure 2 User Manual	10
Figure 3 Test Menu	12
Figure 4 Setup Menu	13
Figure 5 Scale Menu	14
Figure 6 Capacity Menu	14
Figure 7 Calibration Menu	15
Figure 8 Serial Menu	15
Figure 9 Layout Menu	& 27
Figure 10 Reset Menu	32
Figure 11 Removing the 3265 head	
Figure 12 Removing the back plate	34
Figure 13 Removing the pc board	
Figure 14 Ribbon cable	

Pages are numbered consecutively beginning with the cover page.

Specifications

Display 7 segment LCD, 6 digits, 0.7 inch high with 5 decimal points

7 segment LED, 6 digits, 0.6 inch high with 5 decimal points

Light Emitting Diodes 8 LEDs for the following functions:

OVER - yellow ACCEPT - green UNDER - red

lb - red kg - red oz - red g - red

Center of Zero - green

A/D Conversion Rate 60 Hz. Delta-Sigma type converter

Internal Resolution 4,718,592 counts per mV/V per second

Excitation for Load Cells | Voltage : 6 volts DC (LCD), 10 volts DC (LED)

Available Current: 69 mA (four 350 ohm load cells) LCD

114 mA (four 350 ohm load cells) LED

230 VAC +10% to -15% @ 0.05 Amp maximum

Battery Information

Available for LCD version only. 30 Hour battery life. 14 hour recharge time. Low battery warning. Low power shutoff. Charging can occur during AC

Accuracy operation.

Handbook 44 for 6,000 divisions (-10 to 40°C)

-10 to 40°C -30 to 60°C

Zero: $\pm .085 \,\mu\text{V/°C}$ $\pm 0.17 \,\mu\text{V/°C}$ Span: $\pm 5.0 \,\text{ppm/°C}$ $\pm 10 \,\text{ppm/°C}$

Linearity (For scale base, 3000 divisions)

Repeatability ±0.005% of capacity, maximum (For base, ±0.01%)

Hystersis ±0.005% of capacity, maximum (For base, ±0.01%)

Calibration and Programming 0.005% of capacity, maximum (For base, 0.01%)

All calibration and programming is done through the front panel with data

Display Rates stored in nonvolatile memory.

Filtering 1, 2, 5, or 10* times per second

Push Button Zero Range 1*, 2, 5, or 10 display intervals

Motion Detection Window ±1%, ±2%, ±5%, ±10%, ±20%, ±50%, ±100%* of Capacity

d = 1 displayed division

Automatic Zero Tracking ±0.25 d, ±0.5 d, ±0.6 d, ±1 d*, ±2 d, ±3 d, ±5 d

d = 1 displayed division

Window: $\pm 0.25 \text{ d}, \pm 0.5 \text{ d}, \pm 0.6 \text{ d}^*, \pm 1 \text{ d}, \pm 2 \text{ d}, \pm 3, \pm 5 \text{ d},$

Rate: 0.1 division per second

Over Range Capacity Starting Delay: 2 seconds

The scale displays weights up to capacity plus 9 divisions, referenced from

the zero value determined by zero setting point, or 105% of capacity,

Under Range Capacity

referenced from the deadload.

Temperature Range

The scale displays weights in the negative direction using the same restrictions as for over-range, but further limited by the number of display digits available.

inportation realigo

-10 to 40°C (14 to 104°F)

Humidity

-30 to 60°C (-22 to 140°F) with reduced accuracy

Up to 100% relative humidity.

Scale Capacity and Division

Pounds	Ounces	Kilograms	Grams
6 x .002	100 x .05	3 x .001	3000 x 1
6 x .001	100 x .02	3 x .0005	3000 x .5
*12 x .005	200 x 0.1	6 x .002	6000 x 2
12 x .002	200 x 0.05	6 x .001	6000 x 1
30 x .01	480 x 0.2	15 x .005	15000 x 5
30 x .005	480 x 0.1	15 x .002	15000 x 2
60 x .02	960 x 0.5	30 x .01	30000 x 10
60 x .01	960 x 0.2	30 x .005	30000 x 5
100 x .05	1600 x 0.5	45 x .02	45000 x 20
100 x .02	1600 x 0.2	45 x .01	45000 x 10
200 x .1	3200 x 1	90 x .05	90000 x 50
200 x .05	3200 x .5	90 x .02	90000 x 20

^{* =} default

Options

- LCD & LED versions
- 230 VAC 50/60 Hz power
- Battery and charger (available with LCD version only)
- RS-232 or RS-485 interface board
- Short and extended towers
- Remote head
- NTEP load cells

Agencies

UL Approved

Introduction

This manual covers software 48307-0025B and newer on the LED model of the QC-3265 and 48307-0017C and newer on the LCD model. These revisions contain the LB-OZ capability which previous versions did not have.

The Quick Check QC-3265 Checkweigher is a low-cost, high-speed production checkweigher housed in stainless steel for harsh, washdown environments. This service manual is divided into the following sections:

- Introduction
- Front Panel
- Installation
- User Menu
 - Calibration
 - Configuration

If you have any problems with your QC-3265 Checkweigher, call your local Weigh-Tronix distributor.

Front Panel

Figure 1 shows the front panel. The panel consists of the following:

- · a six-digit, liquid crystal or LED display
- five keys;

QUICK CHECK

- **▲**TARGET
- **■** UNITS

CENTER OF ZERO ▼

- ► (Right arrow key)
- a center of zero annunciator
- four unit of measure annunciators; lb, kg, oz, g
- three checkweigher annunciators; OVER, ACCEPT, UNDER



Figure 1
QC-3265 Front Panel

Keys

If for some reason the QC-3265 cannot perform a key function (due to motion, range limits, and others) the display will show **CAN'T** while the key is held down.

Key names are abbreviated in many of the instructions of this manual. Instead of saying the up arrow-TARGET key every time it is shortened to this symbol ^.

- ^ = up arrow key
- v = down arrow key
- < = left arrow key
- > = right arrow key

Following are the keys and their functions.

QUICK CHECK

Press this key to toggle between checkweigh mode and weight display mode, assuming you have an active target weight. Use the **QUICK CHECK** key to return to the weight display and checkweigh modes from anywhere in the menus. Press this key to accept a displayed selection and return to a display mode.



Use the up arrow-**TARGET** key to set the target weight. With no weight on the scale, press this key to remove a target weight and enter the weight display mode. With a weight on the scale, press this key set the target weight and to enter the Checkweigh mode from the weight display mode. Also, press this key to move up in the menus.



Use the left arrow-**UNITS** key to change the unit of measure in weight display mode and checkweigh mode. This key works only if more than one unit of measure is enabled. Use this key to move to the left in the menus.



Use the **ZERO**-down arrow key to zero the scale while in either display mode. In the A/D test mode this key sets the offset to zero. Use this key to move down in the menu hierarchy. With a selection displayed, press this key to select that item and go up one menu level.



Use the right arrow key to move to the right in the menus.

Annunciators

Target weight and the tolerances are saved in nonvolatile memory. They are not lost when the unit is powered down.

The lb **and** oz annunciators will be lit when you are in the LB-OZ unit of measure. Two numbers are displayed separated by a space in LB-OZ. The left number is the number of pounds and the right is the ounces to the correct division size

The OVER, ACCEPT, and UNDER annunciators are to the right of the display and are shown below. The OVER light is yellow, the ACCEPT light is green and the UNDER light is red.



The unit of measure annunciators are below the display and are reproduced below. The lit annunciator tells you the currently selected unit of measurement.









The center of zero annunciator, reproduced below, is next to the ZERO key. When the annunciator is lit the scale is within ±¼ division of zero.



Installation



The socket-outlet must be installed near the equipment

and easily accessible.

Double Pole/Neutral Fusing

There is no ON/OFF switch. When the unit is plugged in it will power up.

The scale powers up in weight display mode if there is no target weight in memory.

If there is a target weight in memory, the scale will power up in the checkweigher mode.

If the battery option is installed and enabled, press any key to start.

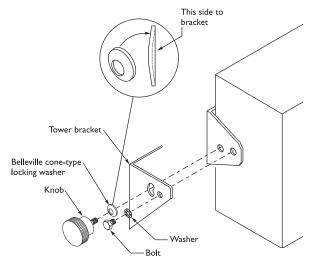
Place the QC-3265 on a stable, level surface.

Use the leveling feet to level the scale. A bubble level is provided and is visible behind the scale platform at the base of the tower or under the scale platform near the load cell. Lock the feet in this position using the locknuts on the feet.

Plug the unit into a properly grounded 115VAC socket-outlet. See note at

Enclosed with the unit are two studded knobs. These knobs are applicable in USDA approved installations. Install knobs by following these directions. See illus.

- Removing the two 10-32 hexhead screws accompanying the unit.
- Replace with knobs.
- Use supplied Belleville washers between knob and mounting surface.
- Install the washer with the major diameter bearing against mounting surface.



Jser Menu

Over and Under tolerance can be set from the User menu or the Setup menu but not both. The choice where the tolerances appear is made in the Setup menu. The tolerances will not appear in the User menu if they appear in the Setup menu and vice versa.

The **o** and **u** do not appear on the digital display if the indicator is in the LB-OZ unit of measure but the Over and Under LEDs do light.

If you change the tolerance but decide you would rather keep the original value, press the ^ key in step 2 to return to **OVER** without accepting the displayed value.

Target weight and the tolerances are saved in nonvolatile memory. They are not lost when the unit is powered down.

When you press the > key from either the checkweighing (deviation display) or the weighing (weight display) mode you access the User menu (see Figure 2). Below are descriptions for all the menu items in the User menu:

OVER & UNDER

OVER stands for over tolerance. Use this menu item to change the over tolerance by following these steps:

1. With OVER displayed, press the **v** key. . .

o 0.5 is an example of what might be displayed. o stands for over tolerance and the value is the current over tolerance. The actual value depends on the unit of measure and division size. The over LED is lit.

2. Press the < key to decrease the value and the > key to increase the tolerance value. Press the v key to accept the displayed value. **OVER** is displayed.

3. Press the > key. . .

UNDER is displayed.

4. Press the v key...

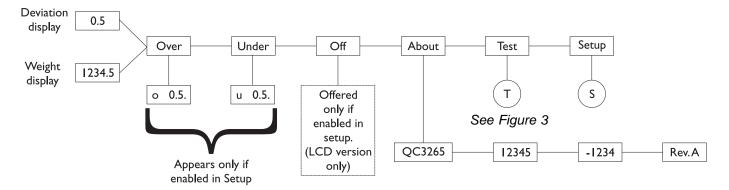
u 0.5 is an example of what might be displayed. *u* stands for under tolerance and the value is the current under tolerance. The under LED is lit.

Repeat step 2. . .

UNDER is displayed

6. Press the > key. . .

OFF or **ABOUT** is displayed.



Move to the right by pressing the > kev

Move down by pressing the v key Move left by pressing the < key Move up by pressing the ^ key.

Figure 2 User Menu

OFF (LCD version only)

OFF is next. This item appears only if **BAT**. is chosen in the setup menu. With *OFF* displayed, press the v key to turn off the QC-3265. Press any key to turn the unit back on. It will start up in the display mode in use when powered down.

ABOUT

ABOUT is the next menu item displayed. This item contains information about the QC-3265.

1. Pressing the v key with ABOUT displayed. . .

QC3265 is displayed.

- 2. Press the > key to step through the EPROM part number, dash number, revision letter, and then back to QC3265.
- 3. Press the * key to go back to the **ABOUT** display. Press the > key to go to the next menu item.

TEST is displayed.

TEST

TEST is the next menu item. Under this menu item you will find a variety of tests and displays. Press the v key with **TEST** displayed and you access the test menu shown in Figure 3. Use the v, ^, <, and > keys as before to move through the menu.

Lets you see the CA (calibration) audit number and the **AUDIT** CF (configuration) audit number.

Press the **v** key twice to perform a display segment test. Press the < or > key to change the direction of the test.

Press the * key twice to stop the test and return to DISP.

BUTTON Lets you check the function of each key. Figure 3 shows you what will be displayed as you press each key.

VOLTS Shows you the voltage at the voltage regulator.

A to D Shows the output of the A to D converter with a sensitivity of 20,000 counts per mV/V. Can be zeroed using the

> **ZERO** key. Use to isolate load cell, cable and electronic problems.

SERIAL Lets you perform READY/BUSY and LOOP/NOLOOP

tests to check the serial port. These tests may be used to

isolate communication problems.

^ = up arrow key

 $v = down \ arrow \ kev$

< = left arrow key

> = right arrow key

Press the **v** key once, then use the < or > keys to step through the display one step at a time.



DISP.

From Figure 2 Τ Disp. Serial Audit Button Volts A to D Display segment Ready Loop 12.0 12345 None test While no key or or is pressed NoLoop Busy CA 000 CF 000 QC While 'Quick Check' is pressed Target Move to the right by pressing the > key While target key is pressed Move down by pressing the v key Move left by pressing the < key Units Move up by pressing the * key While 'UNITS' is pressed Zero While zero key is pressed Displayed when

Figure 3
Test Menu

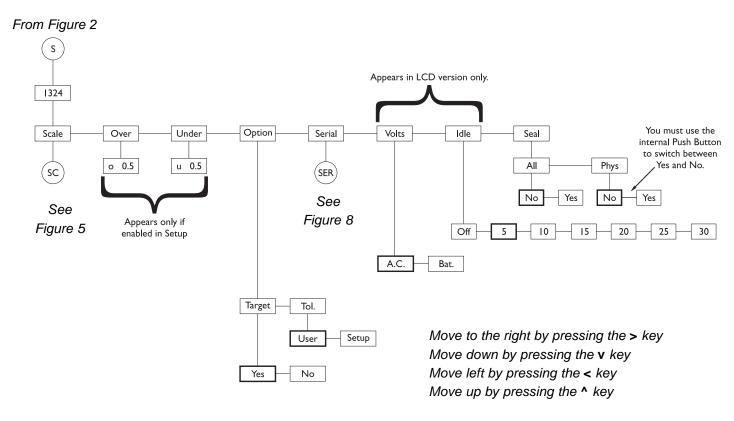
more than one key is pressed.

When the right arrow (>) key is pressed, the unit returns to the "Button" menu.

Configuration

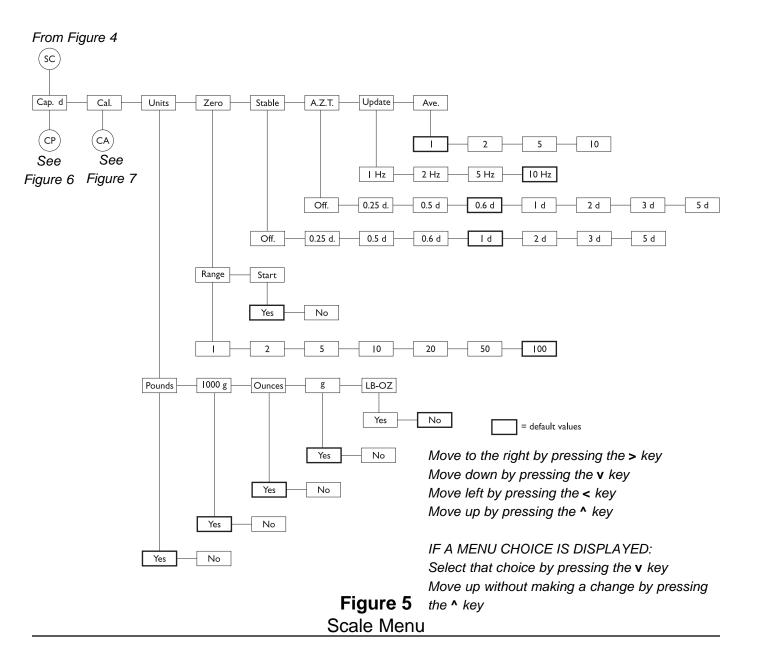
SETUP

This is a password protected menu and is used for basic setup, configuration and calibration of the unit. See Figures 4 through 9. After these menus are the explanations for each item.



IF A MENU CHOICE IS DISPLAYED: Select that choice pressing the **v** key Move up without making a change by pressing the **^** key

Figure 4Setup Menu



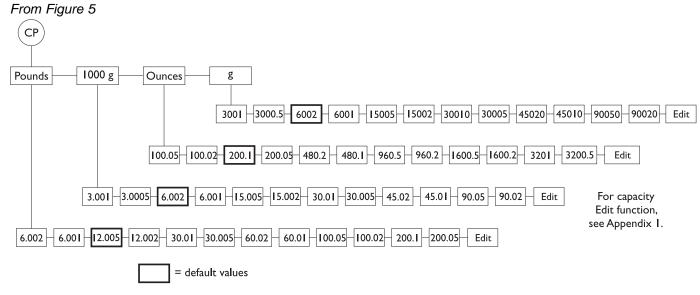
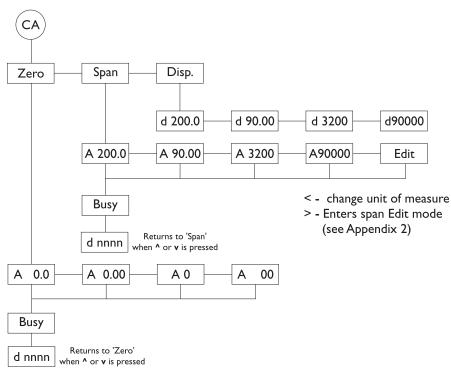


Figure 6
Capacity menu

From Figure 5



The table below applies to earlier versions of the scale that did not have the Edit function shown in Figure 7.

Alternate span test weights are available for the various capacities. See the table below:

Carla Caracita	Alt
Scale Capacity	Alternate Span Weight
6lb	5lb
l 2lb	I 0lb
30lb	25lb
60lb	50lb
6kg	5kg
30kg	25kg
45kg	50kg
90kg	100kg
100oz	80oz
200oz	I60oz
480oz	400oz
960oz	800oz
6000g	5000g
30000g	25000g
45000g	50000g

Figure 7Calibration menu

From Figure 4

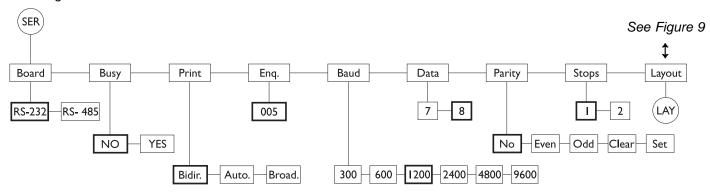
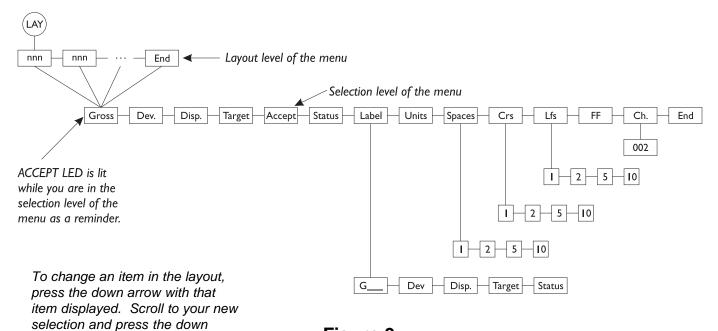


Figure 8
Serial Menu

From Figure 8



arrow again. To insert a new item in the layout. Press the down arrow with "END"

displayed. Scroll to your new selection and press the down arrow again.

Figure 9 Layout Menu

Password protection

The setup menu requires a password entry before any items can be edited. The items can be viewed if the password is ignored but no changes will be possible.

When you access the setup menu a four digit number is displayed. Each digit is from 1-4. Every time you access this menu the number is randomly generated. These numbers correspond to the four keys along the left side of the front panel. The QUICK CHECK key is #1, the TARGET key is #2, etc. You need to enter this random number in reverse order to gain access to the edit capability.

Remember to press the password keys in the reverse order of their display on the screen.

EXAMPLE: If the number is 2413 -

press the 3 key (UNITS) press the 1 key (QUICK CHECK) press the 4 key (ZERO) press the 2 key (TARGET)

After the four keys are pressed, press the v (down arrow) key to move down in the menu structure.

^ = up arrow key

v = down arrow key

< = left arrow key

> = right arrow key

SCALE

SCALE is the first item displayed. The menu items under **SCALE** are shown in Figures 5, 6 and 7 and are described below.

CAP. d

1. With **SCALE** displayed, press the **v** key. . .

CAP. d is displayed. This stands for capacity and division size. See Figure 6. This allows you to determine the capacity and division size for your unit. Select a capacity and division size in one unit of measure and the capacity and division size for the other units of measure are chosen automatically.

 Use the arrow keys to view the capacity and division size you want in any unit of measure.
 With the correct capacity and division size displayed, press the v key. . .

The capacity and division size are accepted and the display returns to the unit of measure name.

- 3. Press the *key to return to the *CAP. d* display.
- 4. Press the > key to move to the next menu.

LB-OZ capacity and division size are equal to the configured capacity and division size for ounces. LB-OZ cannot be used as a calibration unit of measure and is not a valid unit of measure within the setup

Select a capacity and division

in one unit of measure and the

capacity and division size for

chosen automatically.

the other units of measure are

menus.

See Appendix 1 for information about the capacity Edit function.

Calibration

CAL.

CAL. is next. This stands for calibration. Press the v key to see the menu structure shown in Figure 7. Use this menu and the instructions below to calibrate your QC-3265.

ZERO

With CAL. displayed, press the v key. . .

ZERO is displayed. Use this to establish the scale's deadload value.

2. Press the **v** key. . .

As an example, **A 0.000** is displayed. The letter **A** is displayed to

Press the **QUICK CHECK** key from any menu to instantly return to the display mode of the QC-3265.

Pressing any key while **BUSY** is displayed will abort the calibration step and the display will return to the previous display. In noisy environments it may be necessary to widen the motion window temporarily for calibration.

make it clear you are not in the weight display mode. The zero value may be displayed differently. It depends on what unit of measure and division size you have selected. You may change the unit of measure while in this display by pressing the < or > key.

With the scale empty, press the v key. . .

The unit says **BUSY** briefly while a stable zero value is obtained, then **d** 0.000 is an example of what is displayed. The **d** is to remind you that the unit is still in calibration. The display is functional so weight change can be checked.

- 4. Press the **^** or **v** key and **ZERO** is displayed.
- 5. Press the > key to move to the next calibration parameter.

The number displayed in step 1 depends on the unit of measure and the capacity and division size selected. You may change unit of measure by using the < key.

See Figure 7 for a list of capacities and alternate weights.

See Appendix 2 for information about the Span edit function.

Pressing any key while **BUSY** is displayed will abort the calibration step and the display will return to the previous display.

SPAN

SPAN is the next calibration parameter. Use this menu to set the scale's span with a test weight.

With SPAN displayed, press the v key. . .

As an example, **A 6.000** is displayed.

A 6.000 means apply a 6 pound weight on the scale. Alternate span weights are available for the various capacities by pressing the > key.

 With the span weight you want to use displayed, place that test weight on the scale and press the v key. . .

BUSY is displayed briefly then **d 6.000** (as an example of what is displayed). The **d** is to remind you that the unit is still in calibration. The display is functional.

Press the ^ or v key and SPAN is displayed. . .

Your unit is now calibrated.

4. Press the > key to move to the next item.

^ = up arrow key

v = down arrow key

< = left arrow key

> = right arrow key

Press the QUICK CHECK key

from any menu to instantly return to the display mode of

the QC-3265.

DISP.

DISP. is next. Use this menu to observe the scale's performance without returning to the weight display mode.

With *DISP*. displayed, press the v key. . .

As an example, **d** 6.000 is displayed. The actual value displayed depends on the unit of measure, the division size, the calibration and the applied weight. The **d** is displayed to make it clear this is not the weight display mode. The weight displayed will change as the scale weight changes but the zero function is disabled. The **UNITS** key functions during this display.

Press the *key or v key to return to the *DISP*. display. This is the last menu in the calibration section. Press the *key to return to the *CAL*. display. Press > key to move to the next item in the Scale menu shown in Figure 5.

UNITS

UNITS is next in the Scale menu in Figure 5. Use this menu to decide which units of measure are available in the weight display mode.

With *UNITS* displayed, press the v key. . .

POUNDS is displayed.

- Press the v key to access this option or press the > key to view the next unit of measure.
- When the unit of measure you want is displayed, press the v key to view whether or not that unit of measure is enabled.
 (YES or NO). Press the > key to change the status. When the correct status is displayed, press the v key. . .

The display shows the unit of measure name.

 Repeat step 3 for all the units, then press the * key to return to the *UNITS* display. Press the > key to move to the next parameter.

ZERO

ZERO is next. Use this menu to set two zero related options - **RANGE** and **START**.

With ZERO displayed, press the v key. . .

RANGE is displayed. This lets you choose from a list of percentages for zero range. See the list in Figure 5.

2. With *RANGE* displayed, press the **v** key. . .

The current percentage of capacity that may be zeroed is displayed.

 Press the > key until the percentage you want is displayed, then press the v key to accept it. . .

RANGE is displayed.

4. Press the > key to view the next parameter.

START

START is the next parameter. This parameter determines how the QC-3265 behaves when it is switched on. Use this parameter to determine whether or not the QC-3265 must reach a stable reading within the above range before it will exit the start-up sequence, automatically zero the scale and begin weighing.

1. With **START** displayed, press the **v** key. . .

YES or **NO** is displayed. Choose **YES** to enable this feature and **NO** if the feature is to be disabled.

2. Press the **v** key when your choice is displayed. . .

START is displayed.

3. Press the * key...

ZERO is displayed.

4. Press the > key to access the next menu.

If you want to exit a value display without changing the current setting, press the ^ key. It returns you to the higher menu level without changing the current selection.

STABLE

STABLE is next. Use this menu to set the motion window size.

1. With **STABLE** displayed, press the **v** key. . .

The current motion window size is displayed. For example, if *1 d* is displayed, this means the motion window is set at ±1 division.

2. Use the > key to scroll through the choices and press the v key when the desired choice is displayed. . .

That value is selected and **STABLE** is displayed.

3. Press the > key to advance to the next parameter.

A.Z.T.

A.Z.T. is next. Use this menu to determine the range within which Automatic Zero Tracking will function.

With A.Z.T. displayed, press the v key. . .

The current AZT range is displayed. For example, if *1 d* is displayed, this means that AZT will function when the displayed weight is within ±1 division of zero.

2. Use the > key to scroll through the choices and press the v key when the desired choice is displayed. . .

That value is selected and **A.Z.T.** is displayed.

Press the > key to advance to the next item.

If you want to exit a value display without changing the current setting, press the ^ key. It returns you to the higher menu level without changing the current selection.

Press the **QUICK CHECK** key from any menu to instantly

return to the display mode of

the QC-3265.

UPDATE

UPDATE is next. Use this menu to determine the display update rate of the QC-3265.

1. With **UPDATE** displayed, press the **v** key. . .

The current update rate is displayed. For example **10 HZ** means the unit is updating ten times per second.

2. Use the > key to scroll through the choices and press the v key when the desired choice is displayed. . .

That value is selected and **UPDATE** is displayed.

3. Press the > key to advance to the next item.

AVE.

AVE. is next. Use this menu to determine how many display update intervals are included in the weight average. Increasing this average provides more stability at the expense of slower response to changes. Decreasing this value speeds up the scale display but decreases the stability of the reading.

With AVE. displayed, press the v key. . .

The current interval is displayed. For example **5** means the unit is averaging the weight seen over five update intervals.

2. Use the > key to scroll through the choices and press the v key when the desired choice is displayed. . .

That value is selected and **AVE**. is displayed. This is the last parameter in the Scale menu.

3. Press the * key to return to the Setup menu in Figure 4. . .

SCALE is displayed.

OVER and **UNDER**

OVER and **UNDER** are the next items if your unit is so configured. See **OVER** and **UNDER** in the *User Menu* section of this manual.

If you disable the **TARGET** key the following things occur:

- TARGET will be the only menu item under OPTION. TOL will not be offered.
- OVER and UNDER will not appear in the user or setup menus.

OPTION

OPTION is next. Use this menu to define whether the **TARGET** key is enabled or disabled and whether over and under tolerances are offered in the User or Setup menu.

1. With **OPTION** displayed, press the **v** key. . .

TARGET is displayed.

2. Press the v key...

YES or **NO** is displayed. Choose **YES** if you want the **TARGET** key enabled. Choose **NO** if you don't. If you choose no, read the note in the left margin.

 Use the > key to toggle between the choices. Press the v key when the choice you want is displayed. . .

TARGET is displayed.

4. Press the > key. . .

TOL. is displayed.

5. Press the **v** key. . .

SETUP or **USER** is displayed.

 Use the > key to toggle between the choices. Press the v key when the choice you want is displayed. . .

TOL. is displayed. The over and under tolerances will be available under the menu you chose; Setup (Figure 4) or User (Figure 2).

- 7. Press the * key to return to the **OPTION** parameter.
- 8. Press the > key to see the next setup menu item.

Serial

SERIAL

SERIAL is the next parameter. The QC-3265 has optional RS-232 or RS-485 communication capabilities. See the exploded drawing in the back of this manual to see how this optional board is installed and wired. Figure 8 shows the serial menu. Below are the explanations for the items in this menu.

1. With **SERIAL** displayed in the setup menu, press the v key. . .

BOARD is displayed. This refers to the type of communication board installed in the unit.

2. Press the **v** key. . .

RS-232 or **RS-485** is displayed.

3. Use the > key to toggle between the choices. Press the v key to accept the displayed selection. . . **BOARD** is displayed.

Press the > key to move to the next item. Using the same techniques, continue through the menu in Figure 8. Below are the explanations of each menu item and the selections for each.

The READY/BUSY hardware handshake requires additional wires in your serial interface cable.

BUSY

This is offered only if RS-232 is selected.

Choices:

NO disables the ready/busy input.

YES - suspends data transmission whenever ready/busy input indicates a busy condition.

Bidirectional communication and use of the enquire code are always available. You can also use Auto. **or** Broad. or neither. Automatic and Broadcast are mutually exclusive.

The QC-3265 will only respond to upper case command letters.

Valid weight only when bit 0 = 0 and bit 1 = 0.

PRINT

This determines what will cause data to be transmitted.

Command

Choices:

BIDIR.-

specifies bidirectional RS-232 communication. Sends a predetermined format shown below.

Response

W <cr> S<cr> Z<cr> sponse</cr></cr></cr>	<pre><if>MNNNNNN<sp> <if>SXX<cr><etx> Zero scale*, nothing</etx></cr></if></sp></if></pre>	
busy will be	t be stable, valid and valid and valid by the stable, while unit was ges and keypad functions.	aits for this to occur.
	ge return <lf> = line fe of text character M =</lf>	eed space or negative sign
measure	e 6 character weight aracter field representi	UU = unit of

Scale Status

below)

The high order nibble of each byte is a HEX 3. The low order nibble of the first and second bytes are:

First Byte

Bit 0	Logic 1 = motion detectedLogic 0 = weight stable
Bit 1	Logic 1= indicator at center of zeroLogic 0 = indicator not at center of zero
Bit 2 Bit 3	Not used; Always set to Logic 0Not used; Always set to Logic 0
Second Byte Bit 0	Logic 1= underrange condition*Logic 0= not underranged
Bit 1	Logic 1= overrange condition*Logic 0= not overranged
Bit 2 Bit 3	Not used; Always set to Logic 0Not used; Always set to Logic 0

^{*} The QC-3265 transmits the actual value, clipped to all nines if necessary, for NNNNNN while there is an underrange condition. Also, all nines and overrange status are transmitted whenever there is a *Lock Up* or *L.C. Error* condition.

auton.specifies automatic transmission of the configured layout each time motion ceases after a minimum of a 30 division weight change. If motion detection is turned off, a ±20 division window is used for auto print motion detection.

Any triggers that occur during data transmission are ignored. When a print trigger occurs the display will briefly show SEND.

BROAD. - specifies that data is to be broadcast at the display update rate.

If your system is a sealed or legal for trade system, and your printer can transmit an enquire code to the indicator, mismatch the enquire code normally recognized by the indicator so invalid weights (from motion, lockup, overrange, etc.) will not be printed.

ENQ.

ENQ. stands for enquire. Set the character you want to use as an enquire character. When this character is received by the QC-3265 it will respond by sending the configured print layout.

Default value is 005. Use the < and > keys to decrease or increase the value between 0 and 255.

BAUD

BAUD is next. Choose from the following baud rates:

300, 600, 1200, 2400, 4800, 9600

There are some combinations of data, parity and stops that are not supported by the UART. These are 7N1, 8E2, 802, 8C2, 8S2. 7N2, 8E1, 801, 8C1, and 8S1 respectively will be substituted. If an unsupported combination is chosen the display will flash.

DATA

DATA is next. Choose from 7 or 8 data bits.

PARITY

PARITY is next. Your choices are listed below:

	Data Bits	Stop Bits	Parity
Set (Mark)	7	2	none
Clear (Space)	8	1	none
Mark	7	2	none
Space	8	1	none
Odd	7	1 or 2	odd
Even	7	1 or 2	even

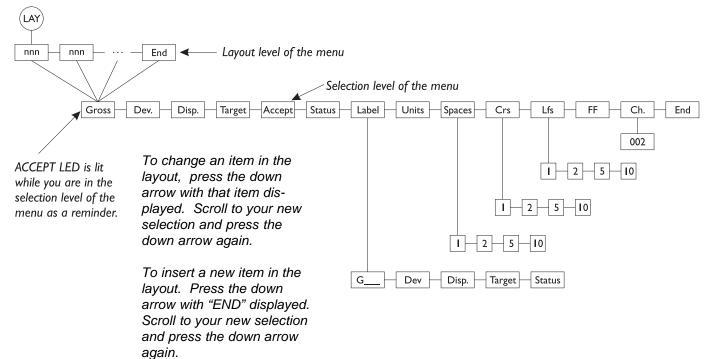
STOPS

STOPS is next. This determines the number of stop bits. Choose 1 or 2.

LAYOUT

LAYOUT is next. Figure 9 (repeated below) shows the layout menu. This is where you are able to design the printout which will be transmitted for **Auto.**, **Broad.**, and **Eng**.

From Figure 8



When the indicator is in LB-OZ unit of measure, the serial output for weight will be formatted to nine places instead of seven for the other units of measure.

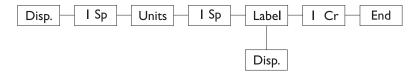
The deviation and gross weights will always have a leading negative sign for negative weights for serial output.

Weights which can't be displayed because of display limitations are formatted properly for serial output. The unit of measure label is formatted as five characters ("lb-oz") when in LB-OZ and as two characters for the other units of measures.

Figure 9 Layout Menu

Press the \mathbf{v} key and view the layout level of the menu. This is the information that will be transmitted. What you see depends on how your unit is already configured.

In Figure 9, the displayed information is represented by the variable *nnn*. The default layout is shown below. Scroll through this list by using the > key.



The layout is made up of the choices you see in the selection level of the menu in Figure 9 (*Gross*, *Dev.*, *Disp.*, etc.). With the desired selection displayed, press the **v** key to select it and the display will return to the layout display.

Up to 30 items may be in the layout. **END** terminates the output format. Any items after **END** are no longer viewed or transmitted. Below are explanations of the selection menu items.

GROSS This specifies that the current weight is to be transmitted. The data is right justified in a 7 character string with leading zero suppression. Output strings similar to those displayed are transmitted in place of the weight data whenever there is an error.

DEV. Specifies that the deviation amount is to be transmitted. If there is no active target weight, spaces are transmitted instead. Uses the same formatting as **GROSS**.

DISP. Specifies that either gross or deviation is to be transmitted depending on the current display mode.

TARGET Specifies that the current target weight is to be transmitted. Same formatting as for **DEV**.

ACCEPT Specifies that a four character string is to be transmitted corresponding to the OVER/ACCEPT/UNDER LEDs.

OVER when OVER LED is lit **ACPT** when ACCEPT LED is lit **UNDR** when UNDER LED is lit

Four spaces when there is not an active target weight

STATUS Specifies that the current status is to be transmitted as a single character. The bits appear as follows:

0011LEBM

L = logic 1 when a low battery condition exists, logic 0 otherwise E = logic 1 when and A-D Error condition exists, logic 0 otherwise

B = logic 1 when weight is over or under range, logic 0 otherwise

M = logic 1 when in motion, logic 0 when stable

The upper four bits are set to 0011 to cause the value to be printed as a digit or symbol in row 3 of the ASCII character set.

LABEL Allows you to choose a label to be transmitted along with the weight value. Your choices are as follows:

G__ - Specifies that a **G** (gross) is transmitted.

DEV - Specifies that **DEV** (deviation) is transmitted.

DISP. - Specifies **G** or **DEV** is transmitted depending on the current display mode.

TARGET - Specifies that **TARGET** is transmitted.

STATUS - Specifies that STATUS is transmitted.

UNITS Specifies that the current unit of measure label is to be transmitted as **Ib**, **kg**, **oz** or **g**_. (Always two characters so g is followed by a space.)

SPACES Displayed at the layout level as **n SPS**, where **n** can be 1, 2, 5, or 10 spaces to be transmitted.

CRS Displayed at layout level as **n CRS**, where **n** can be 1, 2, 5, or 10 carriage returns to be transmitted.

Displayed at layout level as *n LFS*, where *n* can be 1, 2, 5, or 10 line feeds to be transmitted.

STATUS CODES

These are the most common characters you will see on a terminal:

"0" = Valid weight

"1" = Motion

"2" = Range error (Over/Underlaod)

"4" = A-D error

"8" = Low voltage

Combinations of these errors can also occur. (e.g., "3" = Range error (2) **plus** Motion (1))

Status byte = 8 bits

Transmitted as a single ASCII character. The bits appear as follows: 0011LEBM
L has an ASCII value of 8
E has an ASCII value of 4
B has an ASCII value of 2
M has an ASCII value of 1

LFS

FF Specifies that a form feed control character is to be transmitted.

CH. Displayed at layout level as CH. nnn where nnn can be selected as any value between 000 and 255. Specifies that the ASCII character selected be transmitted. This is intended to support sending control characters required for remote displays or simple printer operations. Press the v key and use the < and > keys to increase or decrease the value. Press the v key when the value you want is displayed. Display returns to CH. nnn.

END Specifies the end of the layout. Does not cause anything to be transmitted.

Volts available only in the LCD display version.

VOLTS

VOLTS is the next item in the setup menu. This allows you to determine whether the unit is battery powered or not.

Choices:

- A.C. Specifies the unit is not battery powered. This causes OFF not to be offered in the user menu and IDLE not to be offered in the setup menu.
- **BAT.** Specifies that the unit is battery powered. Enables **OFF** and **IDLE** to appear in their respective menus.

Idle available only in the LCD display version.

IDLE

IDLE is the next item in the setup menu. Allows you to choose a length of time for the unit to be idle (no motion or key presses) before it turns itself off. This item offered only in the setup menu only if enabled under **VOLTS**. Choose from the following choices:

- **OFF** disables auto shutoff
- 5 five minute idle time
- 10 ten minute idle time
- **15** fifteen minute idle time
- 20 twenty minute idle time
- **25** twenty-five minute idle time
- 30 thirty minute idle time

SEAL

SEAL is next. Items in the setup menu (Figure 4) can be protected from unrecorded changes. The level of protection is set in the **SEAL** menu.

Two internal counters record changes to items in the setup menu. View these counters under *AUDIT* in the test menu (Figure 3). These counters cannot be reset and thus can be used by auditors or inspectors to check if changes have been made. One counter is for scale calibration items and the other for configuration items. Table 1 shows the lists counted as

calibration and configuration items.

Calibration	Configuration
Calibration Zero	Capacity
	Units
Calibration Span	Zero Range
	Zero Start
	Stable
	AZT
	Update
	Ave.
	Seal
	ENQ
	Layout
	Target
	Tolerance
	Volts
	Idle
	Board
	Busy
	Print
	Baud
	Data
	Parity

Table 1Counter lists

Stops

ALL & PHYS.

The two parameters in the **SEAL** menu are **ALL** and **PHYS**. Below are explanations of these settings and their consequences.

ALL set to YES

Any time you access the setup menu and change any item in Table 1, the appropriate counter increments one count. Changing multiple items on one visit to the menu increments the counter only one count. It's the number of visits with changes that are counted, not the number of changes per visit.

ALL set to NO

With this setting the calibration internal counter will increment when you access the setup menu and change either calibration item in Table 1. The internal configuration counter will increment only if you change one of the configuration items in **bold** print from Table 1.

PHYS set to YES

If **PHYS.** is set to **YES**, you must remove the physical seal (rear sealing plug) of the QC-3265 to access an internal switch. When you press this switch you have full editing privileges and the display shows the first item in the setup menu, **SCALE**, without the need to enter the password.

If you enter the setup menu using the password and not the internal switch, you can change only the configuration items in Table 1 that are in normal, not **bold**, print..

If **PHYS.** is set to **NO**, you can still press the internal switch and have instant setup menu access and editing privileges.

PHYS set to NO

If **PHYS.** is set to **NO**, correct password entry is the only way to have editing privileges of all the items in Table 1 without breaking the physical seal. See note to left.

If the password is not entered correctly, the setup menu items can be viewed but not edited.

Reset Menus

The reset menu (Figure 10) appears in two cases.

- If you do a Master Clear (powering up the unit with both the Quick Check and Zero keys pressed).
- 2. If setup or calibration data becomes corrupted.

In case 1, you will need to enter the password the same way as explained in the Setup menu. After correctly entering, the menu *RESET* will be displayed.

With *RESET* displayed, press the v key. . .

Setup or Cal. will be displayed.

2. Press the **v** key. . .

NO is displayed. Choose **YES*** to reset to default values or **NO** to leave the values as they are.

 Toggle between the choices with the > key. When the choice you * want is displayed, press the v key. . .

The display will show the other

* If the unit is physically sealed, you must press the internal switch to select **YES.**

choice (Setup or Cal.).

4. Make your choice the same way as in step 3. . .

The unit goes through the power up sequence to weight display mode.

In case 2, the display bypasses the password and goes right to **RESET**.

With *RESET* displayed, press the v key. . .

Setup or **Cal.** will be displayed. If data is corrupted the word on the display will flash.

2. Press the v key. . .

If the SEAL PHYS. selection is

corrupted, the unit assumes that the selection is YES.

NO is displayed. Choose **YES*** to reset the data. If you reset setup and calibration is already set to defaults, the unit will not display **CAL**. and will go to the weight display mode. If Cal. is not at defaults, you are given the opportu

* If the unit is physically sealed, you must press the internal switch to select **YES**.

defaults, you are given the opportunity to reset that as well. When you are done the unit goes back to

Entry point when using master clear.

Entry point on powerup if corrupt data detected.

Reset*
Power up sequence
Weigh Mode**

No Yes

Figure 10 Reset Menu

^{*} not offered if all values are already set to default values.

Flashes if corrupt data detected - must be reset to operate scale

^{**} not available until no corrupt data detected in setup and calibration.

Error Displays

weight display mode automatically.

The following are displays you may see if problems occur or if invalid operations are attempted with your QC-3265:

Display	Description
	Overrange weight.
	Underrange weight.
Loc' up	Recovering from lock-up or out of range condition.
L.C. Err	A-D converter is not functioning.
	A-D converter subjected to an input signal beyond ± 6.66667 mV/V
Can't	
Flashing	The unit cannot perform a function. Displayed only while key is held down.
* \	Corrupted data in the reset menus. See <i>Reset Menus</i> . (* = RESET, SETUP, or CAL)
Lo bat	
Flashing	A low input voltage is detected. This appears when voltage level reaches 10.5 volts and alternates with the normal display. The unit will shut itself off at 9.2 volts. Only available on battery powered units.
All segments	
	Low voltage on the LED version.
Sealed	
auto 0	Displayed while a key is pressed when attempting to modify a sealed selection without edit privileges.
	Scale unstable at power up.
Busy	The system is busy or handshake not responding during
	cycloni io buoy or manaonako not rooponaing dannig

serial port test.

Below are steps and illustrations to help you disassemble your 3265.

1. Remove the bracket screws, shown in Figure 11, and slide the head out of the brackets.

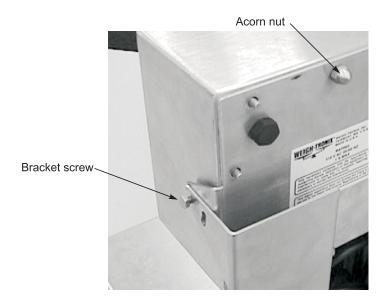


Figure 11
Removing the 3265 head

2. Lay the head face down and remove the back plate. See Figure 12. Take care not to stretch or break the wires connecting the back plate and pc board. Disconnect these wires.



Figure 12
Removing the back plate

3. To remove the pc board, remove the four screws holding down the pc board shown in Figure 13. Disconnect the ribbon cable shown in Figure 14 before removing the pc board from the case.

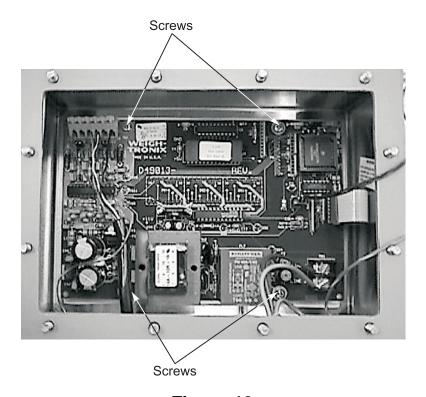


Figure 13
Removing the pc board

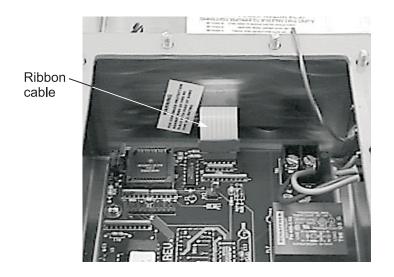


Figure 14
Ribbon cable

4. Install any needed parts and reverse the disassembly procedure to reassemble.

Appendix 1: Editing Capacity and Division

Under CAP. d
in the User menu

Pounds 1000 g Ounces g

6.002 ---- 200.05 Edit

Under each of the units there are the normal choices and at the end of the list is the display *Edit*. Follow these steps to change the capacity and division size:

1. Press the **v** (down) arrow key. . .

500.1 (for example) is displayed. This is the current capacity and division size.

2. Press the > key to start the right most digit flashing. . .

The **1** begins flashing in this example.

3. Press the > key to increment this digit or press the < key to select the next digit. If the decimal is next in line it will flash. If you press the > key with the decimal flashing it will move to different positions. When the capacity and division size

you want is displayed, press the \mathbf{v} key to accept the value. . .

Press the **v** (down) arrow key to accept a displayed value.

Press the > (right) arrow key to

start a digit flashing, increment

the flashing number or move a

Press the < (left) arrow key to

Press the **∧** (up) arrow key to

exit the display and move up

one level in the menu structure

change which digit (or the

decimal point) is flashing.

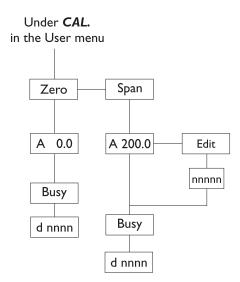
without accepting any

changes.

flashing decimal point.

Edit is displayed. Follow the normal procedure to leave the menu structure when you are done.

Appendix 2: Editing Span Value for Calibration



Under Span in the CAL menu above there is an Edit menu item after the current span choice. Using the same rules for editing the number as you used for capacity and division, change the size of span weight you want to use, place that weight on the scale, and press the v (down) key to accept it. The calibration procedure continues as normal from there.

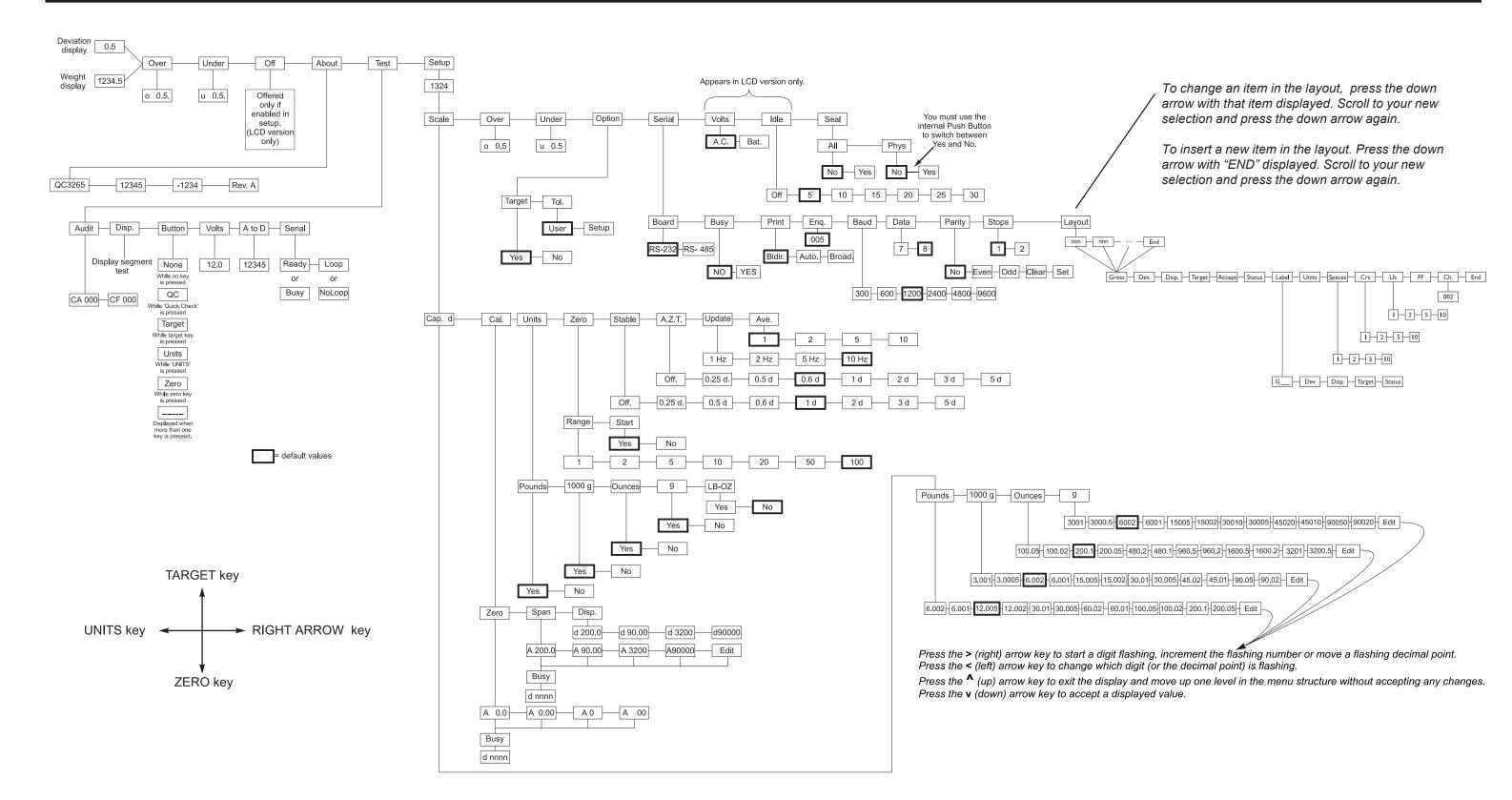
- 1. Press the **v** (down) arrow key. . . **200** (for example) is displayed. This is the current span value.
- 2. Press the > key to start the right most digit flashing. . .

The **0** begins flashing in this example.

Press the > key to increment this digit or press the < key to select the next digit. If the decimal is next in line it will flash. If you press the > key with the decimal flashing it will move to different positions. When the span value you want is displayed, press the v key to accept the value. . .

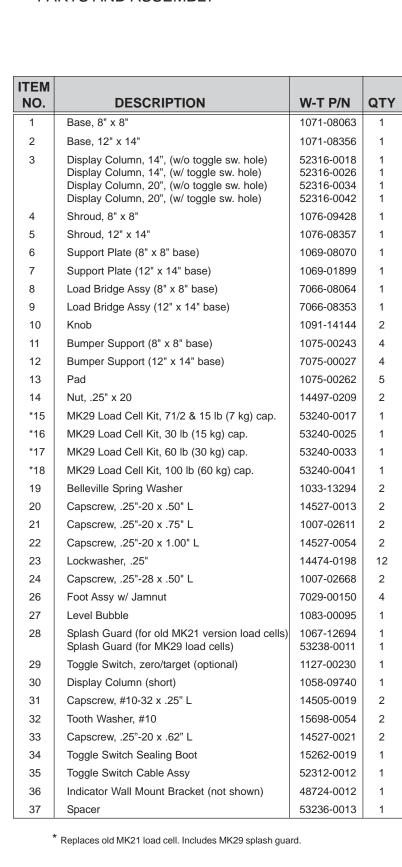
Edit is displayed. Follow the normal procedure to leave the menu structure when you are done.

Appendix 3: Complete Menu Structure



MODEL QC-3265 CHECKWEIGHER (Low Ccap.)

6 lb and 12 lb Capacity w/ 8" x 8" BASE, 30 lb, 60 lb and 100 lb Capacity w/ 12" x 14" BASE PARTS AND ASSEMBLY

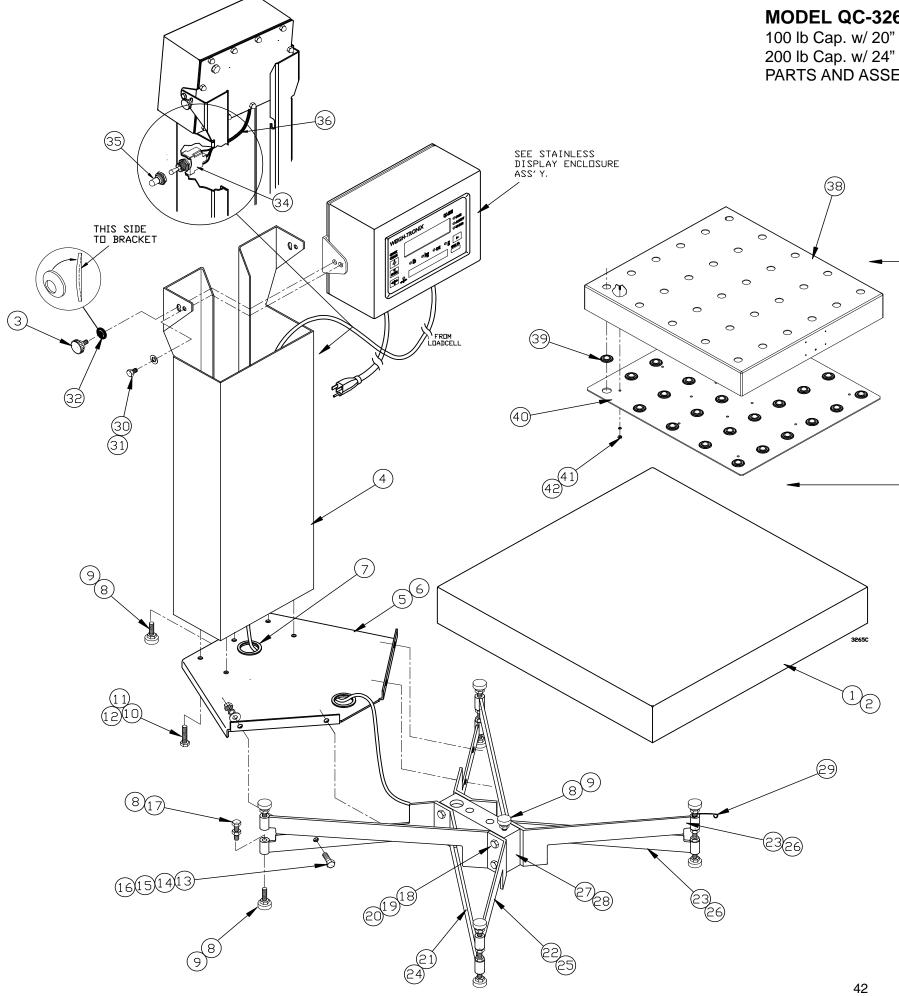


THIS SIZE THE SIZE TH	LBS.

MODEL QC-3265 CHECKWEIGHER (Medium Ccap.)

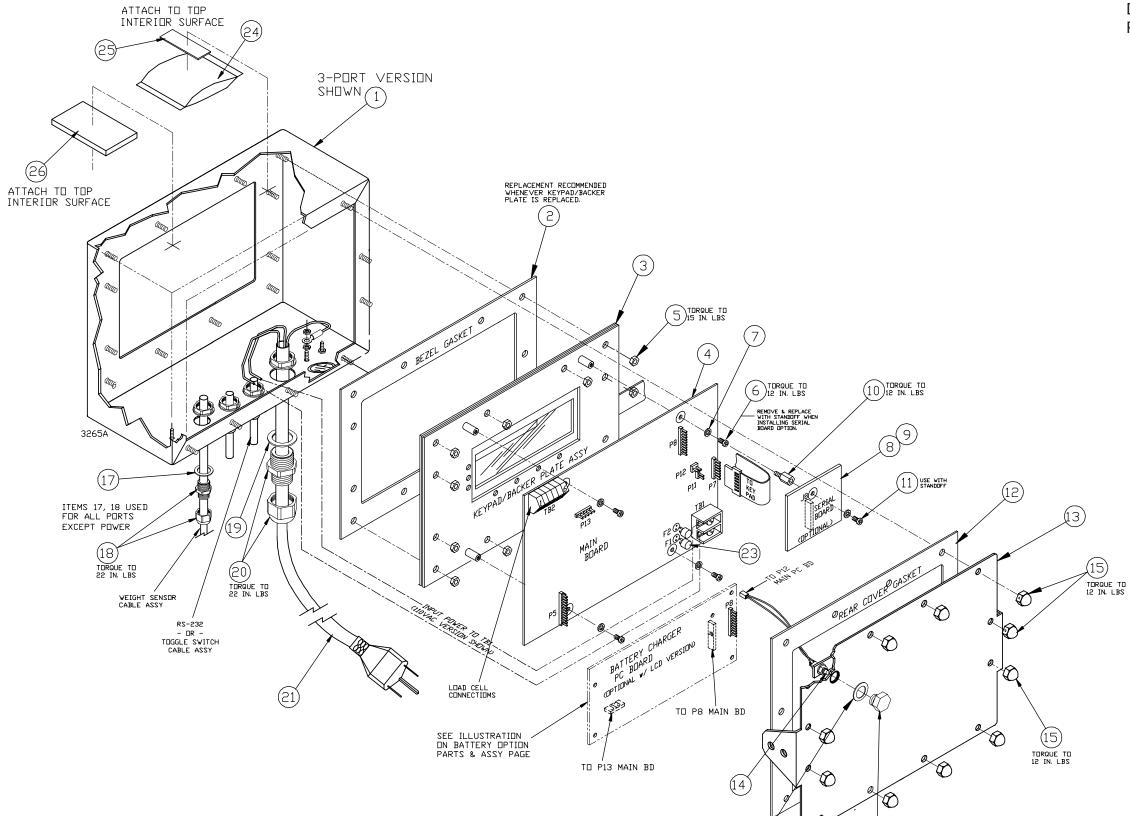
-33 (OPTIONAL)

100 lb Cap. w/ 20" x 20" DECK, 200 lb Cap. w/ 24" x 24" DECK PARTS AND ASSEMBLY



ITEM		=	
NO.	DESCRIPTION	W-T P/N	QTY
1	Deck, 20" x 20"	21325-0038	1
2	Deck, 24" x 24"	21325-0046	1
3	Knob	1091-14144	2
4	Display Column (31" high)	27568-0023	1
5	Column Mtg Bracket (20x20 deck)	24308-0017	1
6	Column Mtg Bracket (24x24 deck)	24307-0018	1
7	Grommet	15347-0034	.66" (2)
8	Jam Nut, .31" - 18	14497-0217	14
9	Foot	17796-0028	10
10	Nut, .25" - 20	14471-0209	4
11	Lock Washer, .31"	14474-0198	4
12	Bolt, .25" x .62" L	14527-0021	4
13	Nut, .31" - 18	14471-0076	4
14	Lock Washer, .25"	14474-0073	4
15	Flat Washer, .31"	14475-0205	4
16	Bolt, .31" x1.25" L	14527-0195	4
17	Bolt, .31" x 1.00" L	14527-0187	4
18	Bolt, .44" x 2.75" L	17889-0448	4
19	Lock Washer, .44"	14474-0222	4
20	Nut, .44"	14471-0233	4
21	Spider, Left (20" x 20" deck)	21332-0039	1
22	Spider, Left (20" x 20" deck)	21332-0013	1
23	Spider Right (20" x 20" deck)	21332-0021	2
24	Spider, Left (24" x 24" deck)	21333-0038	1
25	Spider, Left (24" x 24" deck)	21333-0012	1
26	Spider Right (24" x 24" deck)	21333-0020	2
27	Weigh Bar Assy, 100 Lb (20" X 20" deck)	49098-0075	1
28	Weigh Bar Assy, 200 Lb (24" X 24" deck)	49098-0083	1
29	Ground Spring	20850-0025	2
30	Capscrew, #10-32 x .25" L	14505-0019	2
31	Tooth Washer, #10	15698-0054	2
32	Belleville Washer	1033-13294	2
33	Ball Top Shroud Assy (optional), 20" x 20" (carbon steel)	50695-0054	1
	Ball Top Shroud Assy (optional), 20" x 20" (stainless)	50695-0062	1
	Ball Top Shroud Assy (optional), 24" x 24" (carbon steel) Ball Top Shroud Assy (optional), 24" x 24" (stainless)	50695-0070 50695-0088	1 1
34	Toggle Switch, zero/target (optional)	1127-00230	1
35	Toggle Switch Boot	15262-0019	1 1
36	Toggle Switch Cable Assy	52312-0019	'
37	Indicator Wall Mount Bracket (not shown)	48724-0012	'
38	Ball Top Shroud, 20" (carbon steel)	50700-0016	'
50	Ball Top Shroud, 20" (stainless)	50700-0016	1 1
	Ball Top Shroud, 24" (carbon steel)	50702-0014	1
	Ball Top Shroud, 24" (stainless)	50702-0022	1
39	Ball Unit	48594-0019	(as needed)
40	Ball Retaining Plate	50701-0015	1
41	Nut, #10	14506-0059	12
42	Lock Washer, #10	14474-0057	12

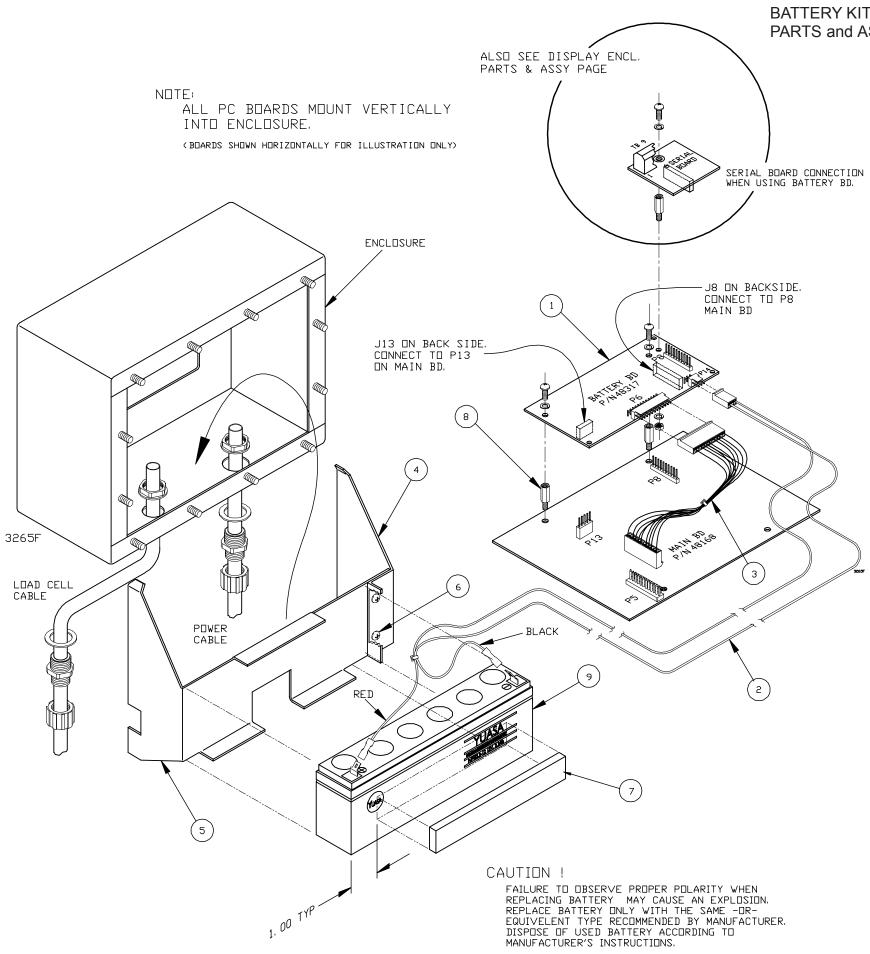
DISPLAY ENCLOSURE (STAINLESS)
PARTS AND ASSEMBLY



ITEM			
NO.	DESCRIPTION	W-T P/N	QTY
1	Enclosure (3-port)	48185-0014	1
	Enclosure (4-port)	48185-0022	1
2	Bezel Gasket (also see keypad/backer kit)	1055-13599	1
3	Keypad / Backer Plate Kit (LCD) (incl: keypad,		
	backer plate and gasket)	60265-0103	1
	Keypad / Backer Plate Kit (LED) (incl: keypad, backer plate and gasket)	60265-0111	1
*4	Main Pc Board Assy (115V) LCD	48168-0015	1 1
	Main Pc Board Assy (230V) LCD	48168-0023	1
	Main Pc Board Assy (115V) LED	49013-0010	1
	Main Pc Board Assy (230V) LED	49013-0028	1
5	Nut #8-32	1025-00125	15
6	Screw, #6-32 x .31" L	14473-0231	4
7	Lock Washer, #6	14474-0032	4
8	Rs-232 Serial Pc Board Assy (optional)	48230-0019	1
	RS-232 Serial Pc Bd Kit (includes mtg. Hardware)	48440-0056	1
9	Rs-485rial Pc Board Assy (optional)	48230-0027	1
10	Standoff, #6-32 x .50"L (use w/ serial option)	15437-0449	1
11	Screw, #6-32 x .38" L (use w/ serial option)	14473-0249	1
12	Rear Cover Gasket	48187-0012	1
13	Rear Cover	48186-0013	1
14	Momentary Button Switch Assy	48178-0013	1
15	Cap Nut	15786-0016	10
	Cap Nut (sealing)	26513-0013	2
16	Nylon Sealing Plug, .38"-16 x .31" L	1019-11926	1
17	Neopr. Washer,515" I.D. (use one per port)	26357-0020	1-3
18	Strain Relief (use one per port)	15257-0032	1-3
19	Neopr. Washer, .640" I.D. (use w/ pwr cord)	26357-0038	1
20	Strain Relief (use w/ pw cord)	15257-0040	1
21	Power Cord W/ Plug End	15318-0013	1
22	Neoprene Flat Washer	1030-12680	1
23	Fuse, 1/2 amp (115 vac)	48561-0117	2
	Fuse, 1/4 amp (230 vac)	48561-0083	2
24	Dessicant Bag	1088-12126	1
25	2-Side Sticky Tape1/2"w x 1" L	1045-05982	1
26	VCI Emitter (corrosion vapor)	48680-0014	1
27	LCD Display tube (ref. LCD Bd. assy. illustration)	22329-0065	1

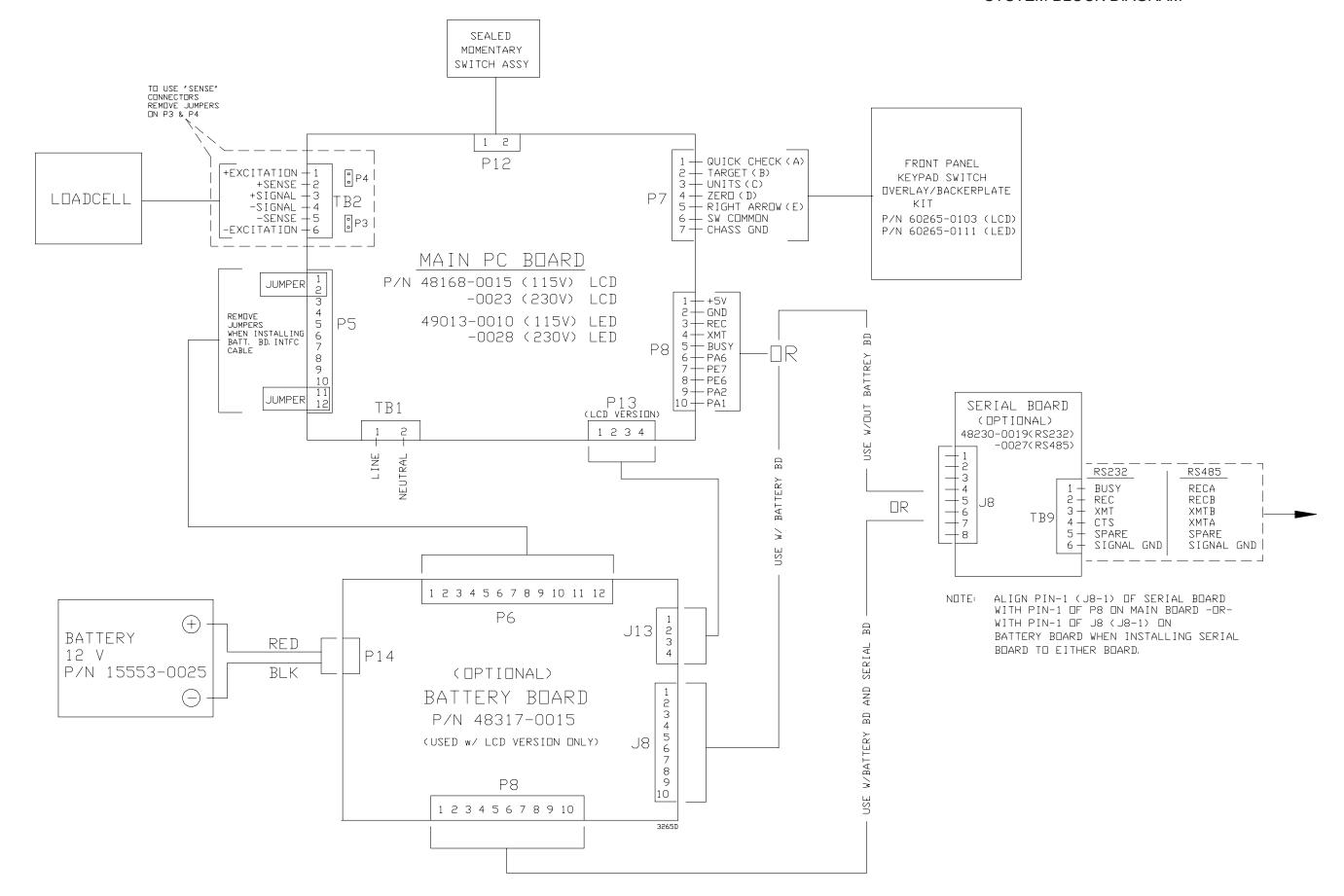
^{*} Ref the LCD & LED "main board" illustrations in this manual for E-PROM p/n's

BATTERY KIT (OPTIONAL, LCD VERSION ONLY)
PARTS and ASSEMBLY

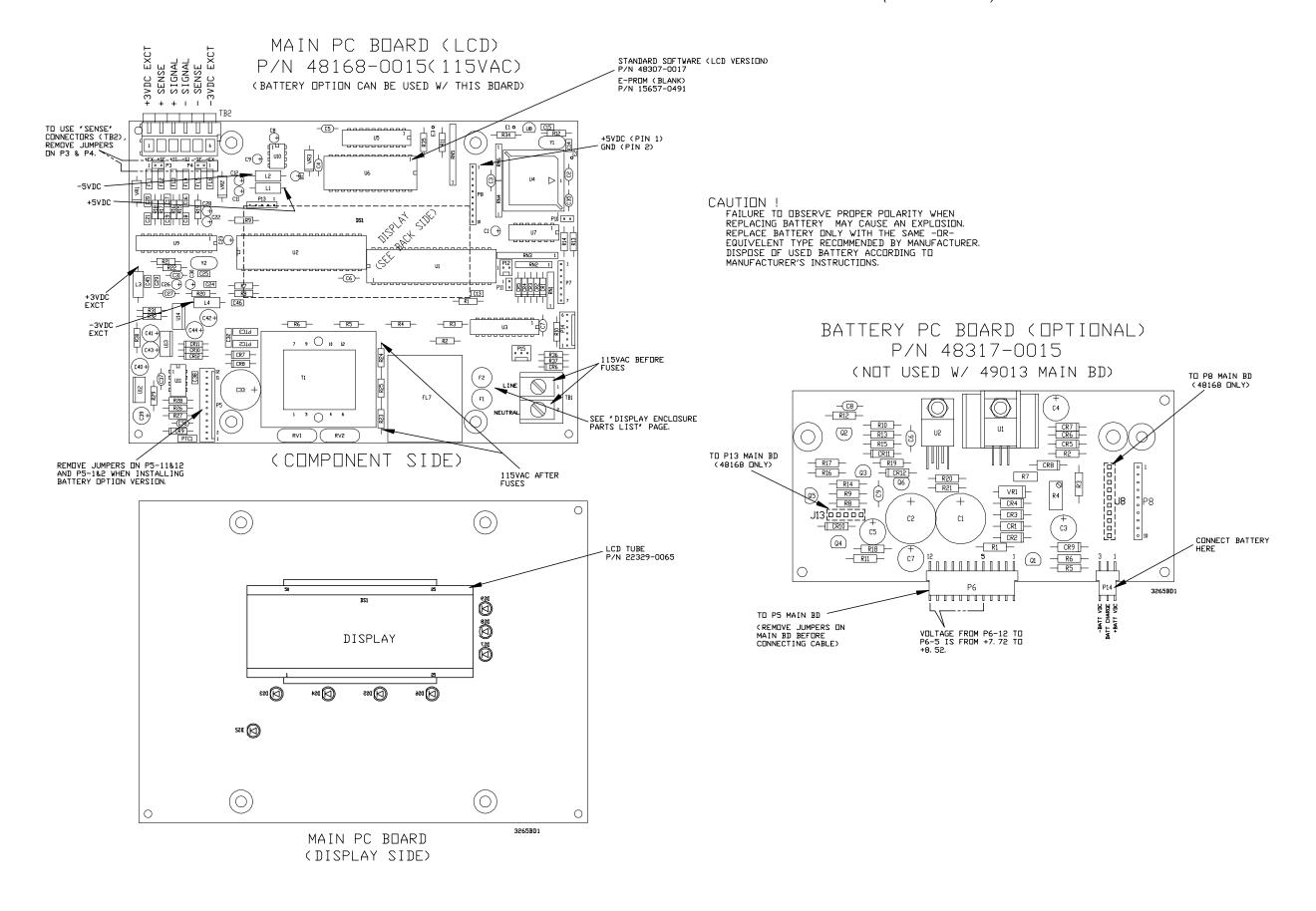


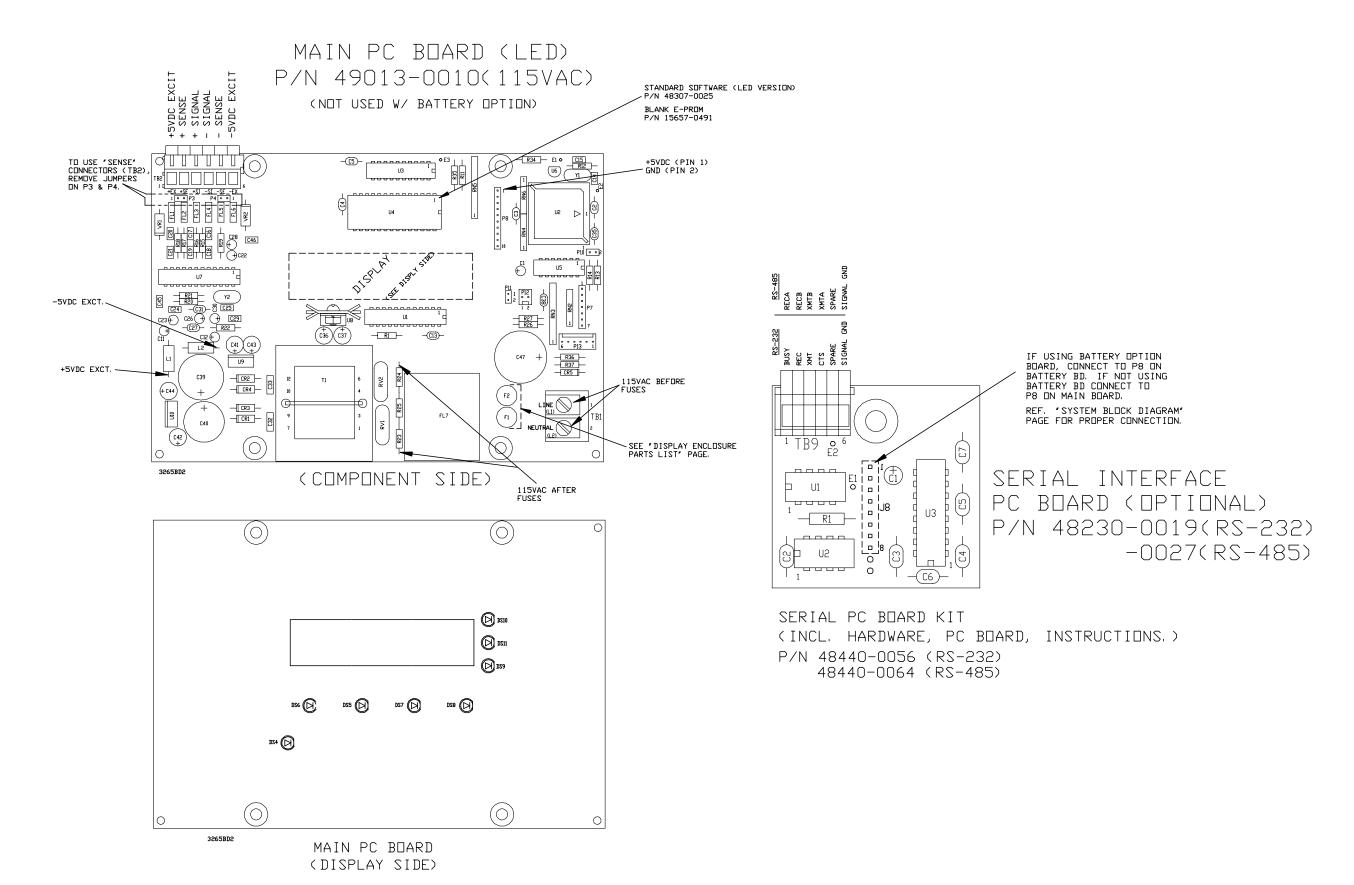
ITEM			
NO.	DESCRIPTION	W-T P/N	QTY
1	Battery Charger PC Board Assembly	48317-0015	1
2	Battery-to-Charger PC Board Cable Assy	48436-0011	1
3	Charger Bdto-Main Bd Cable Assy	48437-0010	1
4	Battery Support Backet (right)	48434-0013	1
5	Battery Support Bracket (left)	48435-0012	1
6	Screw #6 x .38" L	14473-0249	2
7	Weather Strip (.42" long)	15366-0063	1
8	Standoff male/female #6 x .50" L	15437-00449	2
9	Battery, 12V	15553-0025	1
	Field Installation Kits		
	Battery Installation kit, incl: all above items	48442-0054	

LCD and LED VERSION SYSTEM BLOCK DIAGRAM



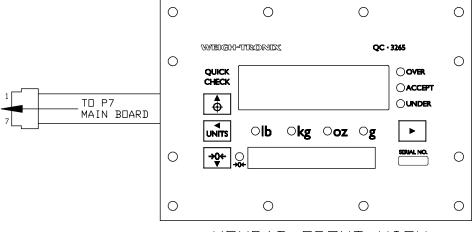
PC BOARD ASSEMBLIES (LCD VERSION)



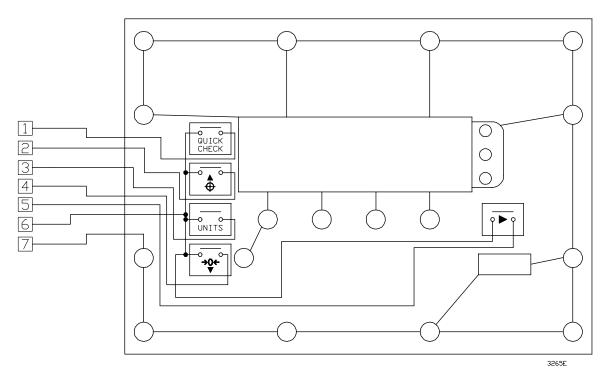


INDICATOR KEYPAD ASSEMBLY and SCHEMATIC

P/N 60265-0103 (LCD VERSION) P/N 60265-0111 (LED VERSION)



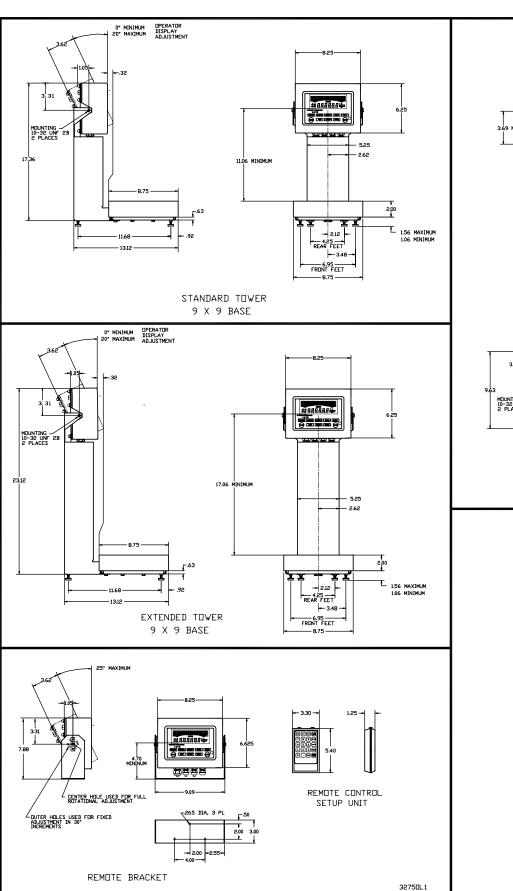
KEYPAD FRONT VIEW

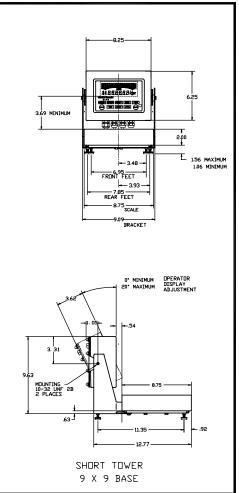


SCHEMATIC DIAGRAM

MODEL QC-3265 CHECKWEIGHER

KEYPAD AND DIMENSIONAL OUTLINE DRAWINGS

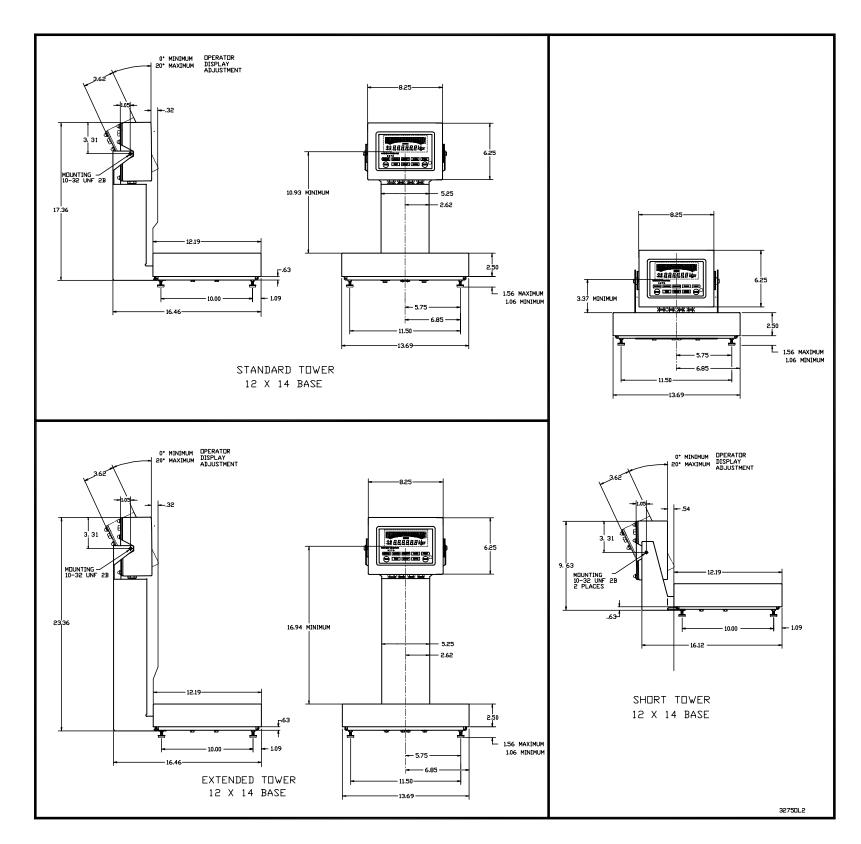


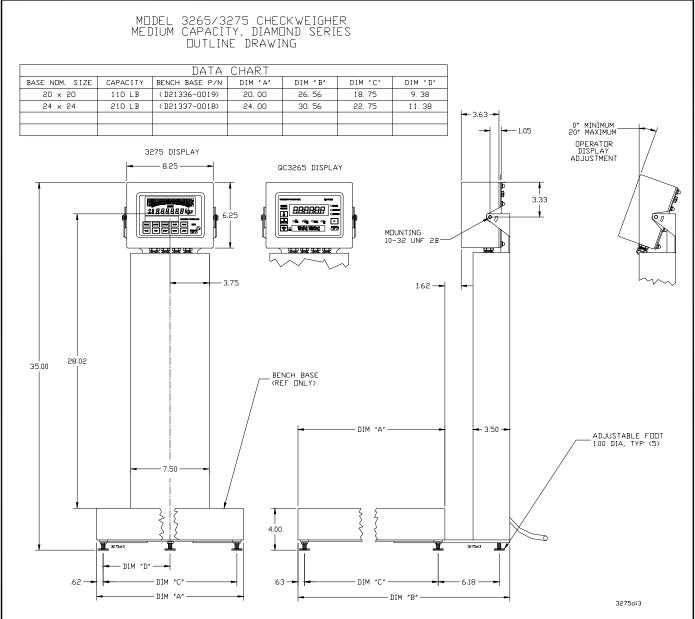


QC-3265 / 3275 DIMENSIONAL OUTLINE DRAWINGS

48

DIMENSIONAL OUTLINE DRAWINGS





Avery Weigh-Tronix

Avery Weigh-Tronix USA

1000 Armstrong Dr. Fairmont MN 56031 USA Tel: 507-238-4461

Fax: 507-238-4195

 ${\bf Email: usinfo@awtxglobal.com}$

www.wtxweb.com

Avery Weigh-Tronix UK

Foundry Lane, Smethwick, West Midlands,

England B66 2LP

Tel: +44 (0) 8453 66 77 88 Fax: +44 (0)121 224 8183 Email: info@awtxglobal.com www.averyweigh-tronix.com